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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,673	11/15/2001	Bob J. Overton	A8126	7526

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EXAMINER	
LAMB, BRENDA A	

ART UNIT	PAPER NUMBER
1734	

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Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary

Application No.	Applicant(s)
09/487,673	Overton et al
Examiner	Group Art Unit
LAMB	1734

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☑ Responsive to communication(s) filed on 1/18/2002 and 10/16/2002.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☑ Claim(s) 1-32 is/are pending in the application.

Of the above claim(s) 1-17 and 30-32 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☑ Claim(s) 18-28 is/are rejected.

☑ Claim(s) 29 is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☑ The proposed drawing correction, filed on 10/16/2002 is ☑ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____.

Attachment(s)

☑ Information Disclosure Statement(s), PTO-1449, Paper No(s). 1/18/2002 ☐ Interview Summary, PTO-413

☑ Notice of Reference(s) Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other _____

Office Action Summary

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-17 and 30-32, drawn to method, classified in class 427, subclass 163.2.

II. Claims 18-29, drawn to apparatus, classified in class 113, subclass 125.

The inventions are distinct, each from the other because:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process as claimed can be practiced by another materially different apparatus, such as an apparatus that does not comprise an optical fiber draw tower.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Attorney Volk on 11/4/2003 a provisional election was made without traverse to prosecute the invention of Group II, claims 18-29. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-17 and 30-32 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one

or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 18-20, 23-25 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuck et al 5,939,137.

Kuck et al '137 teaches a design of an apparatus for curing the coating on an optical fiber comprising an optical fiber draw tower having a coating bath with an outlet opening 46 acting as a coating die leaving a layer of coating on the optical fiber and a curing device located downstream from the coating die to cure the coating thereon.

Kuck et al '137 teaches an ultrasonic transducer emitting ultrasound that is operatively coupled to the coating container having the coating die/outlet. Kuck et al '137 fails to teach that curing of coating is effected by the ultrasound from the ultrasonic transducer. However, Kuck et al teaches that ultrasound from the ultrasonic transducer minimizes air bubbles in the coating and present of air bubbles on the coated fiber results in non-uniformity of coating layer thickness and such non-uniformity in coating layer thickness would obviously have an effect on the curing process. With respect to claim 19, Kuck et al '137 teaches the ultrasonic transducer is operatively coupled to the coating die. With respect to claims 20 and 25, absent a clear recitation of how the ultrasonic transducers are coupled, Kuck et al '137 teaches the apparatus includes a plurality of transducers as shown in Figures 3A and 3B and elements of the optical fiber draw tower including the coating die and curing device are operatively coupled to one another and therefore to the plurality of transducers. With respect to claims 27-28, Kuck et al '137 teaches that the plurality of transducers makes contact with the coating. With respect to claim 4, Kuck et al "137 teaches the ultrasonic transducer emits a frequency within the scope of the claim (see column 4, 55-58). With respect to claims 23-24, Kuck et al '137 fails to teach the ultrasonic transducer emits ultrasound in pulses or frequency of the emissions. However, it would have been obvious to modify the Kuck et al '137 by substituting its ultrasonic transducer with a known ultrasonic transducer – a pulse ultrasonic transducer or a ultrasonic transducer which can emit at a frequency within the scope of the claims since Kuck et al '137 teaches optimizing the operating parameters

of the transducer to control profile of the standing wave of coating (see column 4, lines 13-32).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuck et al 5,939,137 in view of Petisce 5,037,763.

Kuck et al '137 is applied for the reasons noted above. Kuck et al '137 teaches the cure device is an irradiation source but fails irradiation source is a UV radiation emitting source. However, would have been obvious in the Kuck et al '137 apparatus to use a UV radiation emitting device since the use of UV radiation emitting device for curing coating on optical fiber is known as taught by Petisce '763 at column 6 lines 28-31.

Claims 18-22, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 4-175245.

Japan '245 teaches the design of an apparatus for curing coating on an optical fiber. Japan '245 apparatus is comprised of a coating die through which the optical fiber travels to receive coating thereon and a curing device located downstream from the coating die to cure the optical fiber. Japan '245 teaches an ultrasonic transducer emitting ultrasound and coupled to the curing device, which is part of the draw tower. Japan '245 teaches the ultrasonic transducer prevents deposition of aerosol on the inner surface of quartz tube generated during the curing and the deposition of aerosol on the quartz tube within the curing device obviously would have a negative effect on the curing process in the Japan '245 apparatus as a result of the partial blockage of the UV reaching the coated fiber and ,therefore, curing of the coating on fiber is effected by

the ultrasound from the Japan '245 ultrasonic transducer. Thus claims 18-19 are obvious over the above cited reference. With respect to claims 21-22, Japan ' 245 teaches the curing device is a UV radiation emitting device and includes at least one ultrasonic transducer. With respect to claim 20, Japan '245 teaches the apparatus may include one or more ultrasonic transducer. Absent a clear recitation of how the ultrasonic transducer are coupled, Japan '245 shows the plural elements of the draw tower are operatively coupled to one another and ,therefore, to the plurality of transducers as set forth in claim 20 or transducer as set forth in claim 26.

Claims 18, 19 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petisce 5,037,763 in view of Japan 57092549

Petisce '763 teaches the design of an apparatus for coating and curing an optical fiber that is comprised of an optical fiber draw tower having a coating die for coating the optical fiber passing there through and a curing device to cure the coating. Petisce '763 teaches the curing device uses ultrasonic energy. Petisce '763 fails to teach curing of the coating is effected by the ultrasound. However Japan '549 teaches the design of an apparatus for curing an optical fiber. Japan '549 curing device includes an ultrasonic transducer coupled therewith which emits ultrasound Japan '549 teaches curing of the coating is effected by the ultrasound from the ultrasonic transducer. Therefore, it would have been obvious in the Petisce '763 apparatus to substitute its curing device with another known ultrasonic curing device for curing coating on a coated optical fiber such as taught by Japan '549 for the taught advantages of the Japan '549 curing device –ultrasound from the ultrasonic transducer speeds up the curing process.

Thus claims 18-19 are obvious over the above cited references. With respect to claim 25, absent a clear recitation of how the ultrasonic transducers are coupled, it would have been obvious in the modified Petisce '763 apparatus which includes the Japan '549 curing device that elements of the optical fiber draw tower are operatively coupled to one another and therefore, to the ultrasonic transducer. With respect to claim 24, Japan '549 teaches the ultrasonic transducer emits a frequency within scope of the claims.

Claim 29 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to Brenda Lamb at telephone number (571) 272-1231. The examiner can normally be reached on Monday through Tuesday and Thursday through Friday with alternate Wednesdays.

BRENDA A. LAMB
PRIMARY EXAMINER

B. Lamb/af

February 5, 2004